

# MISSOURI. Conservationist

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## [NOTE TO OUR READERS]

# Your Ideas Count for Conservation in Missouri

In a recent opinion survey conducted with adults across Missouri by the University of Missouri, almost all Missourians told us they are interested in Missouri's forests, fish, and wildlife. In fact, 95 percent of Missouri adults

reported they are somewhat or very interested. This high level of interest has been consistent for over 20 years, when compared to results from previous surveys.

Missourians also told us about their participation in outdoor activities, their expectations for the Department of Conservation, and their ideas about conservation issues in our state. The 2013 Conservation Opinion Survey was mailed to over 16,000 households to learn about citizens' interests and expectations about the Missouri Department of Conservation.

The 2013 survey is only one example of how Department staff listen to the ideas of Missourians. Last year, there were 124 activities where 86,427 individuals provided input. The activities included surveys, focus groups, open houses, comment opportunities on regulations, area plans, and specific issues, and questions for the Department's ombudsman. Examples of specific efforts included a statewide survey of anglers, a Black River Walleye survey, focus groups to help the "Trees Work" communication effort, focus groups with loggers, nine open houses on white-tailed deer management, nine open houses on white-tailed deer health, an Upper Mississippi River waterfowl blind hunter survey, 47 comment opportunities on Department area plans, and visitor surveys at conservation areas that included Rockwoods Reservation, the Anita B. Gorman Conservation Discovery Center, and Twin Pines Conservation Education Center. Missourians also emailed, called, and wrote to our ombudsman with questions and ideas. Many of you contacted our *Missouri Conservationist* magazine staff with a wide variety of questions and comments throughout the year or asked questions on the Department's Facebook page.

There are many other ongoing, regular activities where citizens can share ideas with the Department of Conservation. Throughout the year, the Conservation Commission meeting is open to the public and anyone may send comments or request to speak. The Department has eight regional service centers throughout the state where staff are available to assist Missourians with conservation requests and an extensive website, [mdc.mo.gov](http://mdc.mo.gov), with conservation information and online comment forms. You can subscribe on our website to receive news updates by email or text message. The Department's Facebook page has over 110,000 likes. The Department also uses other so-



**We receive important feedback about conservation efforts through Department activities, contact with staff, online comment forms, and social media sites. Your ideas help ensure that future generations can enjoy the quality outdoor experiences that Missouri has to offer.**

cial media sites such as Twitter, YouTube, Pinterest, and Flickr to communicate with citizens.

Through all of the ways we listen, we receive important ideas and feedback about conservation efforts. We use those ideas to make conservation decisions that improve the quality and health of Missouri's forests, fish, and wildlife. Your ideas count, since your ideas and continued feedback are the foundation of great conservation in Missouri.

The ideas of Missouri citizens established the Missouri Department of Conservation in 1936. More ideas established consistent conservation funding in the statewide vote of 1976. And the ideas and support for conservation in Missouri that we receive from you is what continues to enhance our economy and quality of life for all of us today. Help ensure that our children and grandchildren can enjoy a quality outdoors in the future, tell us about your ideas for conservation. Your ideas count!

Robert L. Ziehmer, director



## FEATURES

### 10 **After the Harvest**

*by Jim Low*

Proper carcass disposal is important for good health and everyone's outdoor enjoyment.

### 12 **Fly-Fishing — It's Not Just for Trout**

*by Mark Van Patten, photographs by David Stonner*

Try fly-rodding for different fish in different waters to get more out of your gear and hone your skills.

### 17 **Deer Dialogue**

*by Jake Hindman*

Learn whitetail communication to up the odds of harvesting a deer.

### 24 **Skeleton Trees**

*by Gladys J. Richter, photographs by Noppadol Paothong*

Take a fresh look at Missouri's towering sycamore trees.

Cover: White-tailed buck during rut.

Photograph by Noppadol Paothong.

📷 500mm lens • f/5.6 • 1/320 sec • ISO 800

## DEPARTMENTS

2 **Letters**

4 **Hunting and Fishing Calendar**

4 **Agent Notes**

5 **Ask the Ombudsman**

6 **News & Events**

30 **Plants & Animals**

32 **Places to Go**

33 **Discover Nature**

## WHAT IS IT?

Our photographers have been busy exploring the intricacies of the Missouri outdoors. See if you can guess this month's natural wonder. The answer is revealed on Page 7.



DAVID STONNER

## CLEAN, DRAIN, DRY

I am going to the Branson area and taking my canoe. I know for most lakes and streams there's a recommended time frame you should wait before putting the canoe in another lake or stream to prevent transfer of invasive species. Since Table Rock Lake and Lake Taneycomo are connected, does this still apply? Are there any rules or recommendations?

*Janelle Rae, via Facebook*

*Conservation Dept.: Remember CLEAN, DRAIN, DRY. Clean by removing all plants, animals, and mud and thoroughly wash all equipment, especially in crevices and other hidden areas. If your boat or equipment was used in infested waters, or if you found any attached adult mussels, use a HOT (104-degree) water spray. Drain by eliminating all water before leaving*

*the area, including livewells and transom wells. Dry by allowing sufficient time for your boat to completely dry before launching in other waters. Here is a link to more information: [mdc.mo.gov/node/4681](http://mdc.mo.gov/node/4681).*

## WORDS FROM THE WISE

I want to tell you how much I appreciate receiving the *Missouri Conservationist* each month. I have been receiving it for nearly 40 years. In the summer of 1975, I was a part of the Youth Conservation Corps along with five other youth in Callaway County. Our supervisor encouraged each of us to take a free subscription to your magazine, and I have enjoyed it ever since. That summer of YCC, I really developed an appreciation of Missouri outdoors. Our group worked on both Missouri Department of Conservation and U.S. Forest Service land. We built and maintained hiking trails, planted wildlife food

plots, picked up trash, built turnstiles, started the renovation of an abandoned log cabin, and many other projects. We also did some just-for-fun activities like swimming and spelunking.

None of us knew each other before that summer, but my cohort, Janelle, Tammy, Dennis, Keith, Nathan, and I, developed great friendships for the summer. Nathan and I continued our friendship past YCC, and he has been my husband for 32 years! We both appreciate the knowledge of Missouri's plants and wildlife that we gained that summer.

I encourage Missouri teens to volunteer in our parks and conservation centers. I also recommend a subscription to the *Missouri Conservationist*, a wonderful magazine.

*Pat Carrington, St. Peters*

## HUNTING Q&A

Does Missouri have a regulation concerning minimum draw weight for archery hunting deer and/or turkey?

*Scott Marcee, via Facebook*

*Conservation Dept.: There is no minimum draw weight for archery hunting.*

How do I find out who the local game warden is for my area?

*Joel T. Self, via Facebook*

*Conservation Dept.: Visit our homepage at [mdc.mo.gov](http://mdc.mo.gov) and search by county under "Local Contact" or call your Regional Office (see Page 3 for phone numbers).*

I know we can do the apprentice hunting for rifle. Is it the same with bow hunting?

*Michael Brattin, via Facebook*

*Conservation Dept.: The apprentice hunter program applies to hunting with firearms because you are required to have hunter education certification to hunt with firearms, unless you are exempt for some reason. You are not required to have hunter education for bow hunting, although we strongly encourage it. Here is a link to more information: [mdc.mo.gov/node/10054](http://mdc.mo.gov/node/10054).*



## Reader Photo

## OWL JUST REST AWHILE

Barbara Bazzle captured this picture of a barred owl in her backyard in Wentzville. Bazzle said she and her husband enjoy bird watching and they keep a variety of feeders and a birdbath in their backyard year-round. She has seen many birds in her yard, but this was her first owl. "I got my love of birds from my father," said Bazzle. "He always had bird feeders and a bird bath in the backyard when I was growing up." Her photography hobby came from her mother who loved to take pictures and enter photo contests. "I mostly take pictures of wildlife and nature," said Bazzle, "but, as a new grandma, I have added taking pictures of my grandson!"





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Northeast/Kirksville: 660-785-2420

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Northwest/St. Joseph: 816-271-3100

St. Louis: 636-441-4554

Ozark/West Plains: 417-256-7161

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## READER PHOTO SUBMISSIONS

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Address: Missouri Conservationist, Reader Photo,  
PO Box 180, Jefferson City 65102-0180

## MDC Online

Discover more about nature and the outdoors through these sites.

Blog: [mdc.mo.gov/node/109](http://mdc.mo.gov/node/109)

Facebook: [facebook.com/MDOnline](https://www.facebook.com/MDOnline)

Flickr: [flickr.com/photos/mdc\\_online](https://www.flickr.com/photos/mdc_online)

Kids' site: [XplorMo.org](http://XplorMo.org)

Missouri Conservationist: [mdc.mo.gov/node/83](http://mdc.mo.gov/node/83)

Missouri Department of Conservation: [mdc.mo.gov](http://mdc.mo.gov)

Nature Shop: [mdcnatureshop.com](http://mdcnatureshop.com)

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## KIDS' MAGAZINE

Six times a year we'll bring you eye-popping art, photos, and stories about Missouri's coolest critters, niftiest natural places, liveliest outdoor activities, and people who've made a living in the wild. Come outside with us and XPLOR!

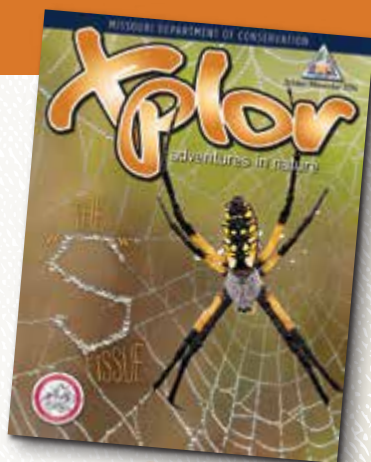
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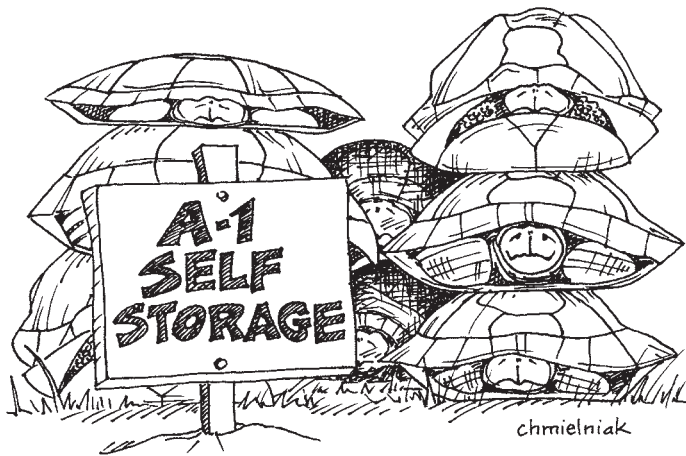
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## SIGN UP NOW!

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## Agent Notes

*Don't Forget to  
"Bag Your Deer"*

WITH THE FIREARMS deer season upon us, more than 500,000 hunters will be heading to the Missouri outdoors this November. Deer hunting adds \$1.1 billion to the Missouri economy, creates more than 11,000 jobs for Missourians, and provides more than 250,000 pounds of meat to families in need through the Share the Harvest program. With all the benefits and enjoyment that comes from this amazing pastime, let's help ensure that it will continue for years to come. Presenting a positive image of hunting to those who may not understand this key tool in deer herd management is important.

Dispose of deer remains where harvested, if possible. If you live in a rural setting, remains can be disposed of on your property, where they will not be offensive to neighbors. Nature will take care of the rest. For those in urban areas, simply bag up the remains and dispose of them with the rest of your garbage.

This deer season, as you enjoy the hunt, remember to dispose of deer remains properly and help represent a wonderful tradition in a positive light.

***Jerid Wilkinson** is the conservation agent for Newton County. If you would like to contact the agent for your county, phone your regional conservation office listed on Page 3.*



## HUNTING AND FISHING CALENDAR

| FISHING                              | OPEN  | CLOSE    |
|--------------------------------------|---|----------|
| Black Bass from Ozark Streams        | 05/24/14  | 02/28/15 |
| Bullfrogs and Green Frogs            | Sunset  | Midnight |
|                                      | 06/30/14  | 10/31/14 |
| Nongame Fish Giggling                | 09/15/14  | 01/31/15 |
| Paddlefish on the Mississippi River  | 09/15/14  | 12/15/14 |
| Trout Parks                          | 03/01/14  | 10/31/14 |
| HUNTING                              | OPEN  | CLOSE    |
| Coyote                               | 05/12/14  | 03/31/15 |
| Crow                                 | 11/01/14  | 03/03/15 |
| Deer                                 |   |          |
| Archery                              | 09/15/14  | 11/14/14 |
|                                      | 11/26/14  | 01/15/15 |
| Firearms                             |   |          |
| Urban Portion                        | 10/10/14  | 10/13/14 |
| Early Youth Portion                  | 11/01/14  | 11/02/14 |
| November Portion                     | 11/15/14  | 11/25/14 |
| Antlerless Portion (open areas only) | 11/26/14  | 12/07/14 |
| Alternative Methods Portion          | 12/20/14  | 12/30/14 |
| Late Youth Portion                   | 01/03/15  | 01/04/15 |
| Doves                                | 09/01/14  | 11/09/14 |
| Groundhog (woodchuck)                | 05/12/14  | 12/15/14 |
| Pheasant                             |   |          |
| Youth                                | 10/25/14  | 10/26/14 |
| North Zone                           | 11/01/14  | 01/15/15 |
| Southeast Zone                       | 12/01/14  | 12/12/14 |
| Quail                                |   |          |
| Youth                                | 10/25/14  | 10/26/14 |
| Regular                              | 11/01/14  | 01/15/15 |
| Rabbit                               | 10/01/14  | 02/15/15 |
| Sora and Virginia rails              | 09/01/14  | 11/09/14 |
| Squirrel                             | 05/24/14  | 02/15/15 |
| Teal                                 | 09/06/14  | 09/21/14 |
| Turkey                               |   |          |
| Archery                              | 09/15/14  | 11/14/14 |
|                                      | 11/26/14  | 01/15/15 |
| Firearms                             | 10/01/14  | 10/31/14 |
| Waterfowl                            | see the <i>Waterfowl Hunting Digest</i> or <a href="http://mdc.mo.gov/node/3830">mdc.mo.gov/node/3830</a> |          |
| Wilson's (common) snipe              | 09/01/14  | 12/16/14 |
| Woodcock                             | 10/15/14  | 11/28/14 |
| TRAPPING                             | OPEN  | CLOSE    |
| Beaver and Nutria                    | 11/15/14  | 03/31/15 |
| Furbearers                           | 11/15/14  | 01/31/15 |
| Otters and Muskrats                  | 11/15/14  | 02/20/15 |

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, *The Spring Turkey Hunting Regulations and Information*, the *Fall Deer and Turkey Hunting Regulations and Information*, the *Waterfowl Hunting Digest*, and the *Migratory Bird Hunting Digest*. For more information, visit [mdc.mo.gov/node/130](http://mdc.mo.gov/node/130) or permit vendors.



ASK  
THE

# Ombudsman



Pack rat's nest

**Q:** My son found a large (3.5-foot-tall and 4- to 5-foot-wide) ground nest on his property in Vernon County. There is a raccoon skull and other stuff in it along with the numerous pieces of blackberry stems, of which the nest is constructed. Is it a pack rat's nest?

Yes, that is a nest of a type of pack rat called the eastern wood rat (*Neotoma floridana*). The species is native to Missouri and occurs primarily in the southern half of the state. Although abundant in some areas, it is not common over much of its Missouri range. Outside of the state, the species is found over much of the southeastern U.S., in several New England states, and west to eastern Colorado and central Texas. Wood rats are almost entirely vegetarians, only occasionally eating insects, dead birds, or snails. They have the habit of collecting shiny objects

and taking them to their nest or nest area. When they "trade" what they are carrying for a more attractive object, a nearby camper may find a pile of sticks in place of a missing pocketknife, keys, or rifle cartridge.

**Q: I have an ash tree that has some odd, dark-colored growths attached to the bare twigs. Can you tell me what it is and if it's a concern for the tree's health?**

You are probably observing ash flower galls, a type of distorted growth of the

male flowers, found on male ash trees. The galls are the result of the early spring feeding of a tiny mite called an eriophyid mite. The tree reacts to the feeding by growing the abnormal tissue that enlarges the male flowers, forming the gall. The galls start out green but darken to brown during the growing season and can remain on the tree for two years. They are most visible when the leaves are off the tree. No treatment is usually recommended because the galls are a cosmetic issue rather than a tree health concern.



Ash flower galls

**Note to readers:** This is my last column as I am retiring from the Conservation Department after 28.5 years of service, the last six of those years as the ombudsman. It has been a pleasure answering your questions and sharing with you some of the interesting tidbits of Missouri's natural history. Thank you for your interest in the natural world and for your continuing support for conservation.

*The ombudsman will respond to your questions, suggestions, or complaints concerning the Conservation Department or conservation topics. Address: PO Box 180, Jefferson City, 65102-0180.*

*Phone: 573-522-4115, ext. 3848*

*Email: Ombudsman@mdc.mo.gov*





Elk bulls

## Discover Nature With Elk Driving Tours

An additional route makes viewing elk easier than ever this year. Self-guided elk driving tours became an instant hit a few months after the Conservation Department brought the first elk to Peck Ranch in 2011. Elk also live on nearby Current River Conservation Area (CA), which is in the 346-square-mile Elk Restoration Zone.

To help visitors locate elk, the Conservation Department has designated a driving tour route that follows portions of Roads No. 1, 9, and 10. Signs mark the driving routes on Current River and Peck Ranch CAs. The routes also appear on maps available through the Conservation Atlas at [mdc.mo.gov/atlas](http://mdc.mo.gov/atlas). Simply enter the area name and follow the links to the area map.

The best times to see elk and other wildlife are right after sunrise and right before sunset. The tour routes are open from sunrise to sunset daily, unless closed because of inclement weather or a managed deer hunt.

Elk driving tour routes at Peck Ranch CA will be closed for managed hunts Oct. 31 through Nov. 2, Nov. 15 through 25, and Dec. 6 and 7. For more information about elk driving tours at Peck Ranch CA, call 855-2-MDC-ELK (855-263-2355). For information about the tour at Current River CA, call 573-663-7130.

While you are in the area, stop at the Twin Pines Conservation Education Center, which is 1 mile east of Winona on Route 60. Twin Pines is open from 8 a.m. to 5 p.m. Tuesday through Saturday. For more information on Twin Pines, call 573-325-1381, or visit [mdc.mo.gov/node/293](http://mdc.mo.gov/node/293).

## Wild Turkey Brood Survey Shows Continued Progress

Results of the annual wild-turkey brood survey are in, and the news is good, especially in the northern half of the state.

This year's survey showed strong reproduction, bolstering gains posted in 2011 and 2012. It showed a statewide poult-to-hen ratio of 1.7. This is a vast improvement from 2007 through 2010, when the statewide poult-to-hen ratio ranged from 1.0 to 1.2. This year's poult-to-hen ratio is 26 percent above the 10-year average and identical to the past 20-year average.



This is the third time in four years Missouri has had a statewide ratio of 1.7 poult per hen. The exception was last year, when a late spring coupled with heavy rainfall during the critical incubation period held the ratio down to 1.5 poult per hen. Even that was good compared to the 2007–2010 performance.

Northeastern Missouri had the best news this year, with a ratio of two poults per hen. Northwestern Missouri was close behind with a ratio of 1.9. The lowest poult-to-hen ratios were reported in the western Ozarks (1.3), in western prairie counties (1.4), and the Mississippi Lowlands (1.5). The rest of the state was near or above the 20-year average.

The strong showing of turkeys in northern Missouri is very heartening, because that area

was most affected by the downturn in turkey reproduction that began in the early 2000s. This year's poult-to-hen ratios were higher than last year's in eight of nine of Missouri's turkey-production regions, and the statewide ratio was up 31 percent compared to last year. That will translate into more turkeys in the woods for the fall hunting season.

A four-year run of good turkey reproduction is highly encouraging for long-term turkey hunting prospects. Although this year's hatch won't have too much of an effect on next year's spring harvest, it will result in an abundance of 2-year-old gobblers during the 2016 season. Couple that with carryover from previous years of improved production, and Missouri hunters have quite a bit to be excited about right now.



Results of the 2014 wild turkey brood survey are available at [mdc.mo.gov/node/29159](http://mdc.mo.gov/node/29159). Details about fall turkey hunting regulations are found in the *2014 Fall Deer & Turkey Hunting Regulations & Information* booklet. It is available wherever hunting permits are sold or online at [mdc.mo.gov/node/131](http://mdc.mo.gov/node/131).

## WHAT IS IT?

### Frost Flower

Not really a flower at all, frost flowers are delicate, beautiful ribbons of ice crystals that form on the lower stems of a few species of Missouri native plants. They occur only in late fall after the first few hard freezes and while the ground is still warm. Their season is brief, and they disappear quickly on the day they occur, melting when the air warms or rays of sunlight fall on the delicate structures. While the plants' stems are ruptured by the first hard freeze, the root system is still sending up plant sap from the warmer ground. The sap pushes through the broken stem and freezes on contact with the cold air. As more sap moves up, it forces the freezing stream of white ice crystals into ornate, folded ribbons that look like petals, puffs of cotton candy, or snarls of white thread. Missouri plants known to produce frost flowers include dittany, stinkweed, and white crownbeard. Scientists don't know what it is about these species that allow them to produce frost flowers. Perhaps their root systems are more active later in the year than other species, or their stems rupture in just the right way to force the ribbons of sap. Whatever the reason, frost flowers only appear on the stems of a few species. —photograph by David Stonner



(continued from Page 7)

## Conservation Agents to the Rescue!

Conservation agents teamed up with other state workers to rescue motorists stranded by flash flooding in September. Torrential rains inundated parts of Interstate 29 and other roads in Holt County on the night of Sept. 9 and 10.

Conservation agents Jade Wright and Anthony Maupin, working with the Missouri Highway Patrol and the Missouri Department of Transportation (MoDOT), plucked several people from muddy, swirling waters between midnight and 2:30 a.m. Swift current had pushed a vehicle off Highway N north of Mound City. To reach it,

they first had to hook a boat and trailer to a front-loader to reach a launching point. They were then able to get the driver into the boat and back to shore, but not without some tricky maneuvering.

"It took a couple of attempts to get up to her," Wright said. "The water was very fast; we were very lucky."

## Banding Woodies

Ever harvested a banded wood duck in Missouri? If you have, you probably reported the band number to the Bird Banding Lab to learn where the bird was banded. This citizen cooperation, paired with lots of hard work by bird banders, aids in the monitoring of wood duck populations across North America.

Bird banding involves capturing the birds and affixing a lightweight aluminum band to their tarsus, or what appears to be their lower leg. (A bird's tarsus is actually an evolved foot bone that elongated over time — what we see as their foot is really just their toes!) Banding is the primary tool to assess wood duck populations, both as a measure of how well the birds are surviving year to year and also to measure effects of harvest regulations. Traditional survey techniques used on other waterfowl species, like aerial flights over breeding grounds, are not effective methods for wood ducks due to their secretive nature and use of forested sites — these characteristics make wood ducks difficult to detect from the air. Each state within the Mississippi Flyway has a wood duck banding goal, and these goals are a more reliable way to determine population estimates. Missouri's wood duck banding goal is 1,200. This includes 200 each of adult male and females and 400 each of juvenile male and females.

The Conservation Department has participated in the wood duck banding program for more than 50 years. The Department has the most complete data from 2000 to 2012 on 11 banding sites across Missouri. Here are some statistics from that dataset:

- More than 44,000 wood ducks have been banded from 1960–2012, ranging from a high of 2,059 birds in 1989 to a low of 169 birds in 1986. More than 10,000 of those wood ducks were banded between 2000 and 2012.
- 1,097 of the wood ducks banded by the Department have been harvested or recovered in 28 states and three Canadian provinces.
- Wood ducks banded in Missouri by the Department have had the highest band recoveries in Louisiana (25 percent) and in Missouri (23 percent).
- 65 percent of banded wood ducks recovered in Missouri were banded here.

Capturing wood ducks for banding is an exciting venture. Portions of wetland areas where wood ducks have been observed are baited for a week or two, and rocket nets are used when the ducks have gathered. Rocket nets use gunpowder charges to shoot weights attached to a large



**Wildlife Biologist Eric Merritt and his father, Rick, pose at Clarence Cannon National Wildlife Refuge with the 2,500th wood duck that Eric has banded in his career with the Conservation Department.**

net out over the baited ducks. These nets have also been used to capture deer and turkey for research, and they do not injure the animals. Staff then quickly set up the banding station, remove ducks from under the net, band them, record their band numbers, and release them in the same spot.

If you harvest a banded wood duck (or other waterfowl) this year, please report the band number at [reportband.gov](http://reportband.gov) or call 1-800-327-BAND. They only require the number — you get to keep the band.

## About Wood Ducks

True to their name, wood ducks use wet areas with or near trees, including swamps, marshes, streams, or small lakes. Their bodies are stouter than most ducks with broad tails and shorter wings to help them maneuver between trees when flying. Wood ducks nest in cavities in dead trees, usually where a limb has broken off of the trunk and can easily be 60 feet above the ground or water. Wood ducks also use man-made wood duck boxes near water, if made to specifications that can be found on the Ducks Unlimited website at [ducks.org](http://ducks.org).

—by Sarah Kendrick



## DID YOU KNOW?

*We help people discover nature.*

### Discover Nature Schools Education Units

- » **Our Discover Nature Schools program** features hands-on outdoor learning and helps Missouri students from preschool through grade 12 become life-long conservationists.
- » **Students in outdoor learning programs** perform better on standardized tests and earn higher grade-point averages in science, language arts, and math.
- » **Full-color Discover Nature Schools instructional units** meet Missouri's grade-level expectations and include a teacher guide, student book, and science notebook.
- » **Parents, teachers, homeschoolers, and school districts** can download and review the primary, elementary, middle, and high school instructional units at [mdc.mo.gov/node/9019](http://mdc.mo.gov/node/9019). The preschool unit will be available online in January 2015.
- » **Participating teachers and schools** can also receive Discover Nature Schools training and funding for equipment.
- » **To launch a Discover Nature Schools program** in your school or class, contact your local education consultant (start with your regional office on Page 3). He or she can introduce you to the units, register you for training, and help you get started.
- » **The annual Discover Nature Schools Science Fair** helps participating schools win recognition and equipment for outdoor learning. Find more details at [mdc.mo.gov/node/19569](http://mdc.mo.gov/node/19569).
- » **In the spring**, Discover Nature Schools can visit our online falcon camera at [mdc.mo.gov/node/16934](http://mdc.mo.gov/node/16934) and use study guides to observe the falcon family's activities. Check out our falcon camera education material at [mdc.mo.gov/node/20703](http://mdc.mo.gov/node/20703).

Later that night, Wright and Maupin helped rescue six people in vehicles stalled on I-29. They rode in the bucket of a MoDOT front loader to reach those stranded and carried them to safety.

Conservation Agent Eric Abbott and a MoDOT road-grader operator rescued a man clinging to the luggage rack of a Jeep Cherokee. Current had swept the Jeep into a median where the water was at roof level. A boat appropriate for the swift water was not available, so they improvised.

The road grader was driven near the vehicle. Abbott moved out to the front of the road grader, tossed the man a rope and instructed him on how to secure it.

"On the count of three, we made a big leap of faith," Abbott said. "He jumped into the water toward the road grader, and I pulled with all my might, and we got him pulled out."

Also on the scene for all rescues were law enforcement, fire, and ambulance personnel.

"It was a team effort," said Conservation Department Northwest Region Protection Supervisor Roger Wolken. "Everybody responded quickly and it put them in a very dangerous situation. It's something we train for and hope we don't have to use. But we want to be prepared for it, and we were."

### MDC Staff Fights Western Fires

Thirty Conservation Department employees traveled west to fight wildfires this past summer, protecting lives, property, and natural resources while ensuring that help will be available to fight Missouri fires.

Summer is the peak season for wildfires in the Western United States. Missouri's fire season occurs in late winter, so sending firefighters to fight western fires doesn't leave Missouri unprotected. In fact, helping fight Western fires means added protection for Missouri. Out-of-state firefighting gives Missourians valuable experience in conducting large-scale operations. It provides hands-on firefighting experience and hones the organizational skills of fire and other emergency administrators.

Coming to other states' aid also guarantees that they will send firefighters and other assets to help combat wildfires when the need arises in Missouri. Taking part in out-of-state firefighting efforts is voluntary for Conservation Department staff, and the USDA Forest Service compensates them for their time.

### Natural Events Calendar On Sale

What costs \$7, lasts 12 months, and makes you smarter and happier every day? If you guessed the Conservation Department's *Natural Events Calendar*, go to the head of the line and buy a copy of the 2015 edition. Next year's calendar goes on sale this month at conservation nature centers and regional offices statewide. It includes captivating wildlife portraits, stunning landscapes, and glimpses into the macroscopic nature universe where crystalline frost stars decorate twigs and river mud becomes geometric art. Daily notes about seasonal nature events keep you in touch with the outdoors, even when you are indoors. The calendar sells for \$7 per copy,



plus shipping and handling and sales tax where applicable. You also can buy copies by calling toll-free 877-521-8632 or through The Nature Shop at [mdcnatureshop.com](http://mdcnatureshop.com).

# AFTER THE HARVEST

Proper carcass disposal is important for good health and everyone's outdoor enjoyment.

BY JIM LOW

**Did you shoot** a nice buck or a fat doe for the freezer last year? Maybe you bagged a limit of rabbits or squirrels or caught a big mess of crappie. Congratulations! You probably can be proud of putting delicious, healthful food on your table.

Probably? Why not certainly? If you obey hunting and fishing regulations, observe high standards for fair chase, and make good use of the resulting meat, why should you question your actions? The answer is leftovers. I don't mean the stuff you put in the refrigerator after a meal of wild meat. I'm talking about what remains when you have butchered your game or fish. Hooves, hides, and hair; heads, fins, tails, and scales — collectively known as offal — sometimes present challenges that can be ... awful.

Decomposing deer or fish carcasses don't have to be an issue. After all, animals die in the wild every day of



natural causes, and their bodies decompose naturally without causing problems. When trouble arises from wild game leftovers, it is usually because of where it ends up.

In the case of fish waste, that sometimes involves people cleaning their fish and leaving the remains at the edge of a lake or stream. This isn't just unsanitary, it's disgusting for those who come along later and see and smell the results of someone else's fishing trip. Don't be the person who leaves animal waste where it will ruin others' outdoor experience.

Missouri's harvest of more than 250,000 deer each year creates the potential for waste-disposal challenges. Most hunters leave waste from field dressing where they shoot their deer, but some careless hunters discard carcasses in roadside ditches or sneak offal into commercial dumpsters without permission. The worst-case scenario is when several carcasses are dumped in public places or near lakes or streams. Besides being illegal and endangering water quality, such inconsiderate behavior gives hunters a bad name.



FISH FILLET: CLIFF WHITE; CRAPPIE: NOPPADOL PAOTHONG





**Decomposing deer or fish carcasses don't have to be an issue. Remove game and fish waste responsibly.**

Many hunters choose to remove meat from deer carcasses in the field, which also avoids both disposal and disease-transmission issues. If you do this, be sure to leave the carcass well away from and out of sight of roads and trails. If you wait until you get home to clean game and fish, waste disposal still can be simple. Just send it to an approved sanitary landfill along with your other garbage.

Because offal gets smelly fast during warm weather, you might want to wrap it securely in plastic bags and store it in the freezer until trash pickup day. This makes sense anyway, since rotting offal attracts flies, neighborhood dogs, and other scavengers. If this isn't practical, seal waste inside sturdy plastic bags and add hydrated lime or sawdust to minimize odor.

Families that shoot several deer a year face bigger disposal problems. One way to minimize waste is to use as much of the animal as possible. Send the hides to a tan-



nery and use them for rugs or wall hangings. Separate the ribs from the spine and bake them in a roasting pan with barbecue sauce.

These are a few ideas about how to deal responsibly with game and fish waste. If you have found other ways to use or dispose of offal, share them on the Conservation Department's Facebook page at [facebook.com/MDCOnline](https://facebook.com/MDCOnline).

*Jim Low has been writing press releases for the Conservation Department since 1990. His first Conservationist article, about the hognose snake, appeared in 1978. His other credits include Outdoor Life, Birder's World, Reptile & Amphibian, and Australian Birding magazines.*

# FLY-FISHING

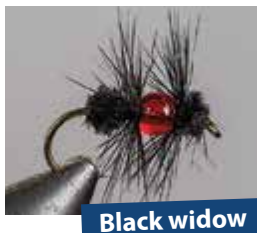
## *It's Not Just for Trout*

Try fly-rodding for different fish in different waters to get more out of your gear and hone your skills.

BY MARK VAN PATTEN | PHOTOGRAPHS BY DAVID STONNER

A recent trout-fishing trip brought to mind the joys of fly-rodding for all kinds of Missouri fish, choosing my fly patterns, gearing up, and heading out into the magenta light of early morning. I knew where a nice brown trout had made his home in one of my favorite streams, and I was betting he wouldn't be able to resist my partridge-and-orange soft-hackle fly. Sure enough, he hit it and put up a good fight.

After bringing him to hand, I sat down on a log at the edge of the pool and cupped his belly, allowing him to rest in the stream while we both caught our breath.



Black widow

### Bluegill Go for Black Widows

I had caught a large bluegill just the day before at a neighbor's pond. Adorned in spring spawning colors, he was larger than my hand with the fingers spread wide. I was certain it

would exceed a pound. I measured it against the stick-on tape measure on my rod, and it just passed the 10-inch mark. That monster bluegill had been fooled by one of my favorite bluegill flies, the **black widow**.

Bluegill are especially susceptible to black, slow-sinking flies. A lot of bluegill fly anglers, however, are like my wife, who is particularly fond of bluegill fishing, but will only fish with a popping bug. Seeing the water explode as a bluegill nails the popper just makes her day.

In 49 years of fly-fishing, I have yet to see an angler catch a bluegill on a fly rod and not be impressed by the experience. Aggressive fighters, bluegill can make you forget all your troubles when the line goes taut. They know how to use their disk-shaped bodies to put up a spectacular fight, with circling runs that will bend your fly rod nicely.

### Hillbilly Bonefishing for Channel Cats

Another common fish that will give you a breath-taking run is the ever-popular channel catfish, which you can find in most stocked







# PURCHASING A FLY ROD AND REEL

## Fly Rods

The single most important tool to a fly angler is the fly rod. Its job begins with casting fly line, leader, and fly to the fish. Once the fly hits the water, the rod is used to control the line and the fly. This is referred to as *mending*. When a fish picks up the fly, the rod's job changes again. The rod is now used to set the hook or drive the hook into the fish's mouth. The role of the fly rod changes once again when the fish is hooked. It is then used to keep a constant pressure on the fly line so the fish cannot pull off or throw off the hook. At the same time, it is being used to play or tire out the fish so it can be landed.

The majority of the fly rods today are between 7 and 9 feet long. These lengths can accommodate the majority of fishing situations. When you hear anglers discuss the weight of a fly rod, they are not referring to how heavy the fly rod is. They mean the size of the line the rod will cast. A 5-weight rod will cast a 5-weight fly line. Size and weights customarily fall into the following pattern.

| Species                            | Fly Rod Length     | Line Weight          |
|------------------------------------|--------------------|----------------------|
| Trout/panfish                      | 6–8.5' 8.5' common | 2–5, 5 wt. common    |
| Bass, catfish, carp                | 8–10' 9' common    | 6–8, 6 wt. common    |
| Bonefish and other small saltwater | 9–12' 10' common   | 8–10, 8 wt. common   |
| Tarpon and other large saltwater   | 9–12' 12' common   | 10–13, 12 wt. common |

The above table is a rough generalization. There are many combinations available today in length and line weights.

For new anglers purchasing rods, here are some important points to remember:

**Buy quality.** Don't scrimp on the most important tool in your fly-fishing kit. A quality fly rod will not only retain its value, you will not have to upgrade to a better rod later. Always buy the best that you can within your budget.

**Buy rods with warranties.** Fly rods are expensive and many accidents do occur! Make sure that you are covered.

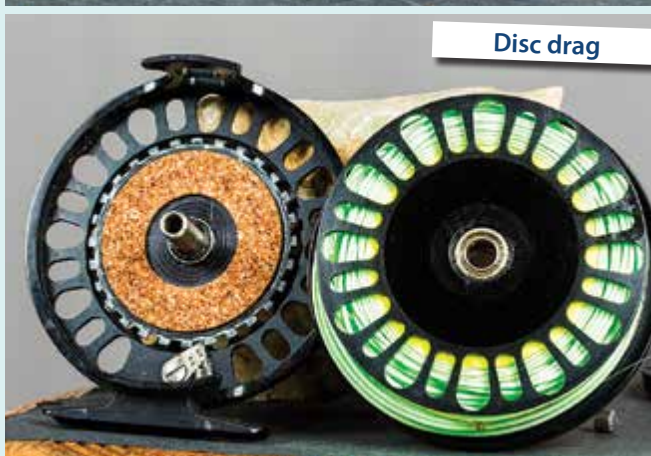


## Reels

The fly reel is an important tool. In combination with the fly rod, it allows more control over the fish. You can slow down a charging run and use it to wear down the fish to bring it to hand.

When fighting fish, the drag system of a reel comes into play. The drag is a mechanical, controlled pressure on the outgoing line. There are two types of drag systems that anglers use today. The click-and-pawl is the simpler, more common drag. It consists of a toothed gear that engages with the points of one or more pawls. These pawls keep tension on the gear and slow the spool down. This type of drag is sufficient for most types of freshwater fish.

The second type of drag, the disc drag, is used to battle larger and more powerful fish. This type of drag is the popular among most anglers today. The disc drag works much like the brake of a car; it has a pad, usually made of cork, on the inside of the frame. The pad keeps tension on the stainless-steel discs. The discs control the amount of tension on the spool that is locked down onto a pillar in the frame. A knob on the outside of the reel controls the amount of drag. The disc drag gives anglers a smooth and consistent amount of tension to help control more explosive fish like a trophy rainbow or a 16-inch smallmouth.





ponds around Missouri. Many anglers are not aware that pursuing catfish on a fly rod can be compared to fly-fishing for bonefish in the Caribbean. I like to refer to it as hillbilly bonefishing. When you fool a 5-pound catfish with a fly, you had better hope you packed a lunch. That struggle will take some time. A catfish will run repeatedly from one side of the pond to the other, not stopping to rest until you are ready to take a seat yourself. Just about the time you think the fish is ready to give up, it resumes with even more determination to break your line. Catfishing with a fly rod is something you will want to experience. Put that one on your bucket list — you'll be glad you did.

I can recall one particular catfishing trip when a fishing buddy and I took our float tubes to a private pond where it was rumored that the average-sized catfish would put fear into Godzilla. We were not entirely convinced until the first of the man-beating monsters grabbed a **Clouser minnow streamer fly** I had tied just for this adventure. I should have worn my cowboy hat and boots for that rodeo. That fish



Even a small bluegill caught on a fly can put a big grin on the face of young and old alike.

dragged my float tube and me back and forth across that 2-acre pond like I was a leaf. You could hear me yahooping a half mile away.

### Hard-Hitting Largemouth Bass

If you are impressed with head-shaking, jump-out-of-the-water fun, you need only make your way to any farm pond, lake, or conservation area pond. The largemouth bass is a hard-hitting predator fish just waiting for your fly to land on the water. Large **popping bugs** and any streamer fly that represents a small forage fish will entice these brutes to test your fly rod and are guaranteed to increase your adrenaline levels. The largemouth bass has a boney mouth, so the hook set needs to be aggressive. A heavier 6- to 7-weight rod with a fast tip is generally much stiffer than a trout rod. This will allow for a successful hook set and ease of casting larger flies.



Clouser minnow



To catch largemouth bass with a fly rod, use a heavier 6- to 7-weight rod with a fast tip.

### Smallies Like Minnows and Crayfish

While bluegill, channel catfish, and largemouth bass will give you and your fly-fishing gear a workout, there is one Missouri native that, ounce for ounce, will outfight any species of fish Missouri has to offer. I am referring to the smallmouth bass. Also known as smallies, bronzebacks, or brownies, smallmouth bass have an affinity for crawfish étouffée on a hook. If you can offer up a well-tied **crayfish pattern**, you have an excellent chance at fooling one into taking your fly. Smallmouth will also hit minnow-pattern flies such as the Clouser minnow.

Smallmouth bass like cool streams. They can occur in the same kind of water and habitat as trout, but they prefer a slightly warmer water temperature found throughout the Ozarks. While fishing the lower end of a blue



Popping bug



Crayfish pattern



ribbon trout stream where water temperatures are marginally warmer, I have occasionally hooked into a nice 15- to 17-inch smallmouth weighing in at a mere 1½ to 2 pounds but was convinced that I had a 5-pound brown trout on the end of my line. To my surprise, a beautiful flash of bronze would break the surface of the water.

### It's All About the Skills

I encourage you to buy, borrow, or gather up your gear and see for yourself that fly-rodding is not just for trout. As I often say, "If it swims and eats anything larger than plankton, it can be caught on a fly."

Casting for different kinds of fish in different kinds of water at different times of the year can help you get more out of your gear — and hone your fly-fishing skills.

In my view, mastering skills is the key to truly appreciating the art of the angle. You

begin by practicing various casting styles, then you study different kinds of aquatic insects so you can tie flies that actually look like them, then learn how to present the flies in a way that mimics their natural behavior, and, finally, land and release the fish you fooled.

Which brings me back to that big brown trout I fooled with my **partridge-and-orange soft-hackle fly**. When I felt its strength returning, I removed the barbless hook from its lip, and, with a flip of its tail, it slipped silently back into its feeding lane.

I always practice catch-and-release, and I encourage you to do the same. After all, these big fish are too beautiful to catch only once. ▲

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*Mark Van Patten learned fly-angling from his grandfather, who instilled in him a love for all things fly-fishing. Mark has been a Missouri Department of Conservation fisheries biologist working with the Stream Team Program for 17 years.*



**Partridge-and-orange  
soft-hackle fly**



# Deer Dialogue

**Learn whitetail communication to up the odds of harvesting a deer.**

**BY JAKE HINDMAN**



A white-tailed buck inhales air through a behavior known as a lip curl. This process allows the buck to use a special organ located inside the mouth, where smells, particularly urine from does, can be deciphered.

**“I did exactly what you mentioned in the program — some grunts and a bleat and the buck came running!” wrote a participant from a recent deer-calling seminar.**

He included a picture of the 10-point buck he had harvested with his son and said that if he had known calling whitetails was so effective, he would have started doing it when he first began hunting.

Hunters all across Missouri have experienced similar success with calling deer. However, white-tailed deer communication is complex and includes much more than the vocalizations we usually think of. Deer hunters can increase their chances of success by having a solid understanding of how deer communicate. Let's review the basics.

### **Whitetail Communication 101**

Whitetails have an advanced communication system. This system plays an important role in deer behavior and, among other things, facilitates the rut. From social bonds to reproduction, whitetails depend on communication to survive.

Deer use most of their senses and a variety of methods when they communicate. For example, a deer in alarm or distress may stomp its foot, sway its head, and snort. During this display, other deer are forewarned visually (foot stomping and head swaying), chemically (scent deposited from the interdigital gland between the toes during foot stomping), and vocally (snort).

### **Visual Communication**

Communication that can be seen is often referred to as visual communication or body language. Whitetails use this type of communication frequently. The waving white flag of a deer's tail as it runs off is an example of visual



**Visual communication can reveal a lot as deer approach. Stiff walking, alert ears, head swaying, foot stomping, and/or a raised tail can be signs of an alert deer that may be aware of your set-up.**

communication. Posturing is also exhibited in whitetails and helps keep social status in check within a deer herd. Bucks and does will display posturing behavior including hair bristling, staring, and head movements. These forms of body language are often used to establish dominance and territory.

Hunters should pay attention to visual communication as deer approach a setup. A relaxed deer will exhibit normal walking behavior and will frequently twitch its tail, giving an “all clear” signal. Stiff walking,





WHITE-TAILED DEER: NOPPADOL PAOTHONG

alert ears, head swaying, foot stomping, and/or a raised tail can be signs of an alert deer that may be aware of a hunter's location.

### **Chemical Communication**

In addition to visual communication, deer use chemical communication through the use of scents. Take an autumn walk in deer habitat and you will most likely find evidence of chemical communication in action. Although visual in nature, scrapes (bare dirt exposed by

bucks pawing the ground with their hoofs) and rubs (tree bark removed with antlers) serve a chemical communication role. While scraping and rubbing, bucks will deposit scent from various glands (see Communication Champions sidebar) that help augment the rut. The use of scents is the most complex form of whitetail communication.

Hunters can capitalize on chemical communication by using various scents and attractants. In addition, given the highly developed sense of smell that deer have, it is important to hunt in areas downwind of where deer

# Communication Champions

When it comes to communication, few animals stack up to whitetails. Take a look at some of the most common communication methods employed by white-tailed deer.

## 1. Eerie Ears

Deer are constantly moving their ears, listening to the world around them. Be careful when calling not to give away your exact position, as their ears can pinpoint location very well.

## 2. Rack Attack

Bucks use their antlers to fight for territory and dominance. Before fighting, bucks will typically posture with their body, which includes tilting their rack downward as they approach stiff-legged toward the opposing buck. Fights are often accompanied by grunts and snort-wheezes.

## 3. Deer Dance

Ever have a deer see you in your tree stand? Often, the deer will sway, bob its head, and/or stomp its foot. The behavior is most likely exhibited to get you to move so the deer can confirm its suspicions that you don't belong there. Stay still as concrete, and the deer may return to normal behavior.

## 4. Forehead Gland

Bucks deposit scent from this gland on trees and overhanging branches while rubbing and making scrapes.

## 5. Bristling Body

Whitetails raise their hollow hairs to show posturing and dominance.

## 6. Telling Tail

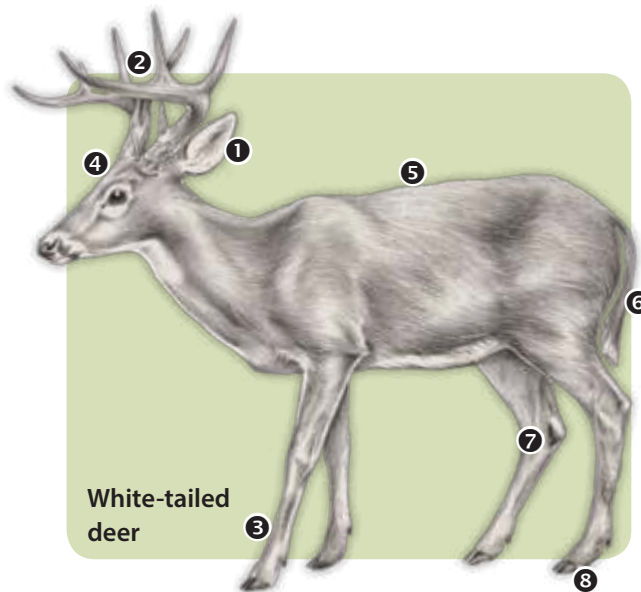
Deer communicate frequently through the use of their tail; a relaxed or twitching tail usually means calmness. An alert or flared tail communicates uneasiness.

## 7. Tarsal Glands

Located at the joint of the rear leg and thigh, these glands help facilitate the mating process each fall. Bucks rub these glands together and urinate on them, creating a rut rank in a behavior known as rub-urination.

## 8. Interdigital Gland

This gland is located between the toes and leaves a scent specific to that deer as it walks or when it stamps its foot.



White-tailed deer

# Deer Dictionary

White-tailed deer make a number of vocalizations. Become familiar with the most basic.

| Vocalization/Call | Description   | Application  |
|-------------------|---|--|
| Contact Grunt     | Social call made by all deer as a form of acknowledgment or as a way to find one another.         | Non-offensive call that can be a great conversation starter when you first call to a deer. |
| Tending Grunt     | Bucks chasing does will often make tending grunts, which are short versions of the contact grunt. | Use along with bleats to convince a buck that he has competition.                          |
| Bleat             | Social call made by fawns and does.   | Use this non-offensive call every 15–20 minutes, making 1–3 bleats each time.              |
| Snort-wheeze      | Aggressive challenge call made by bucks.  | Challenge an aggressive buck or get his attention.   |
| Bawl              | Usually made by fawns in distress.  | Use this call to attract curious does.   |
| Snort             | Made by all deer in alarm; typically when danger has been smelled or seen.                        | The game is likely up at this point.   |



will be approaching and to keep gear clean and scent free. There are a number of commercial products made to help remove scent.

## Vocal Communication

Whitetails also use a wide range of vocalizations to communicate with each other (see Deer Dictionary sidebar). Deer use sounds to convey alarm, distress, social status, and aggression. Many sounds can only be heard less than 100 yards by humans; however, the snort can be heard much greater distances.

Few things can compare to carrying on a conversation with a whitetail. As a result, many hunters will not leave the truck without packing a grunt call. Compared to other game species (turkey and waterfowl, for example) the calls of whitetails are fairly easy to master and reproduce with consistency.

## Communication Tools and Strategies

In addition to other deer hunting methods and techniques, successful whitetail hunters use deer communication to help fill the freezer. There are a number of calling devices and attractants that are designed to help hunters lure whitetails in range.

**Calling devices:** A simple grunt call is in order and can be picked up at your local sporting goods store. Some grunt calls have variable pressure points on the tube that allow for a full range of whitetail sounds to be imitated with only one call. “Can” style calls produce bleats with ease and can be effective as well.

As with other wildlife calling, two main forms of calling exist: contact calling and blind calling. In contact calling, you have seen the deer and can watch the reaction of the deer when you are calling. This can be the most effective form of calling. During blind calling situations, calls are used in a likely spot, approximately every 30 minutes, with the hope of calling in a deer within hearing distance.

**Attractants:** Natural doe urine can be used all season; other scents like estrous or dominant-buck urine are typically more effective closer to the onset of the rut. When placing attractant scents, make sure your hands and clothes are free of any odors offensive to deer.

## Calling Scenarios

Every deer hunt will bring about different scenarios. Here are three of the most common.



Rubs, like the ones above, help facilitate the rut each fall. While bucks rub their antlers against trees, scent is often deposited from their forehead gland and helps aid in the communication process.

### Pre-Rut

**Situation:** It is 7 a.m. on Halloween, and you are bow-hunting on private property. You have not seen any deer. What calls might you try to attract one?



# In addition to other deer hunting methods and techniques, successful whitetail hunters use deer communication to help fill the freezer.

*Technique:* Consider faking a fight. Start out by offering grunts and then build up with intensity while using doe bleats intermittently. Rattle with a rattle bag for approximately 5 seconds, pause to look and listen for an approaching deer, then continue rattling and pausing for 30 seconds. Finish the calling sequence with soft grunts.

## Rut

*Situation:* You and your daughter are participating in the Youth Firearms Season. A buck runs past your stand chasing a doe and into thick cover. You can see the deer, but it is too thick for a shot. How do you call this buck or doe in close enough to harvest?

*Technique:* Start by grunting and bleating to let the deer know you are there. If they pay no attention, do some light sparring (rattling) and challenge the buck to a fight by offering a snort-wheeze. It's unlikely, but the buck may become disinterested in the doe and come to kick your tail.

## Post-Rut

*Situation:* It is the last day of the Alternative Methods season and you are hunting a large clover field. A group of does comes out at the end of the field you are hunting, out of range. How do you call one of these does in closer for a shot?

*Technique:* Offer soft bleats and grunts until they have heard you. Give it 10–15 minutes before making a few barely audible bleats again. Don't be surprised if the group slowly starts to work your way to investigate your calling.



**Bucks will often use their antlers to fight, which can establish territory and dominance. Hunters can use rattling, the technique of imitating bucks fighting, to call in deer.**

Not every deer hunt that involves communication will end like the hunt described in the opening of this article; however, hunters will have a higher chance of success with an understanding of white-tailed deer communication. Study how whitetails communicate and apply that knowledge appropriately, and you will be well on your way to notching your tag this fall. ▲

*Jake Hindman, outreach and education district supervisor in the St. Louis region, enjoys hunting and communicating with white-tailed deer.*

WHITE-TAILED DEER: NOPPADOL PAOTHONG;  
DEER HUNTER: DAVID STONNER



## Work a Whitetail

Every deer will respond differently to communication techniques; however, there are a few guidelines you can employ for success.

**Pick a Solid Set-Up:** Scout the area in advance to locate a deer hangout. Position yourself where you have good cover along with appropriate shooting lanes. Keep movement to a minimum. Stay safe by wearing hunter orange when appropriate and using equipment properly and safely (firearms, bows, treestands, etc).

**Play the Wind:** While searching for your set-up, try to figure out where the deer will likely come from (bedding areas, feeding areas, travel corridors) and set up downwind of the area where deer will approach. In addition, use cover scents (fresh earth, pine, or raccoon urine works well) to fool a whitetail's nose.

**Learn the Language:** Understand what you are saying when you call to a deer (see Deer Dictionary sidebar). For example, if it is early season, hard rattling may not be realistic.

**Build the Conversation:** Start out with soft passive calls (contact grunts, bleats) before becoming aggressive. You can always ramp up calling later; however, once aggressive language is used, you cannot take it back.

**Read Reaction:** If contact calling, pay attention to the deer's reaction and change the conversation if needed. For example, if a buck bristles up and puts his ears back after you grunt at him, this is an aggressive buck that can be worked over with aggressive calling. If a deer is approaching your setup, only call enough to keep the deer coming. Often, once a deer has committed to investigating, you will not need to call again. If blind calling, pay close attention to your surroundings as a deer could approach your setup anytime.

Calling whitetails can be extremely effective. Grunt-style calls with variable pressure points make a wide range of calls and can reproduce realistic deer vocal communication with ease.







Take a fresh  
look at  
Missouri's  
towering  
sycamore trees.

# *Skeleton Trees*

**BY GLADYS J. RICHTER**

PHOTOGRAPHS BY NOPPADOL PAOTHONG

The American sycamore grows naturally alongside creeks and rivers, upon sandy gravel bars, and in rich bottomland forests east of the Rocky Mountains.







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**March madness for trout and spring fever** for crappie have long passed, and my light rod and tackle have been replaced by heavier line, sinkers, and some hard-to-come-by night crawlers. I am in the mood for a good fighting fish, yet so far all it has been is two nibbling bluegill and a turtle. I set my rod on a forked stick and take in the sights and sounds along the lazy Gasconade River.

Across the river stand at least a dozen sycamores, or skeleton trees, as I like to call them, with their large trunks of peeling, paper-like bark, and chalk-white upper-canopy branches. Working away at one of those trunks is a pileated woodpecker, Missouri's largest woodpecker species. Perhaps it is after a tasty insect grub just beneath the sycamore's bark. Upon another nearby sycamore, on a branch over the water's edge, sits an eastern phoebe. This tiny insect-eating bird looks even smaller in contrast to the towering tree.

*Giants Among Us*

Sycamores are some of the largest living things you will find in Missouri. Definitely trees that would make a sound if they were to fall in the woods. When it comes to size, they are champions. While certainly not as large as the famous redwood sequoias of California, sycamores possess the height, girth, and canopy to make one perk up and take notice.

In Polk County stands one of Missouri's largest trees — a sycamore measuring 27 feet and 9 inches in trunk circumference and a total champion score of 457 points. For a while this tree reigned as number one in the state. It was only recently surpassed as the biggest by an eastern cottonwood tree with a score of 458. Another Missouri sycamore was documented with a crown spread measuring more than half an acre in size. That is a lot of shade!

Prior to becoming our first U.S. President, George Washington wrote in his journal about a



A few sycamores have held places of historical significance. It has been said that the New York Stock Exchange began beneath a sycamore tree with the signing of the "Buttonwood Agreement."



couple of large sycamore trees he viewed while canoeing. One measured almost 45 feet around, while the other was nearly 31 feet.

The American sycamore grows naturally alongside creeks and rivers, upon sandy gravel bars, and in rich bottomland forests east of the Rocky Mountains. Its rapid growth and ability to adapt to urban settings have made it a popular tree for planting in city parks as a shade tree and in other landscape designs. Since it was first cultivated in 1640, many different varieties have been created from the original native sycamore. Areas with saturated soils often prohibit the growth of many species of trees, but not sycamores. They thrive where it is wet for most of the year.





In their natural riparian environment, sycamores can grow over 100 feet tall and are often found in association with other bottomland trees such as elm, ash, silver maple, and black willow. While their size and light-colored bark are probably their most easily identified characteristics, sycamores have many other fascinating features.

### *Sycamore Seasons*

Tucked away within the thick petioles of sycamore leaves are next year's buds, which are encapsulated in a sticky covering. The palmately shaped leaves are bright green on top and lighter underneath. Each leaf can measure between 3 and

9 inches. With cool autumn temperatures these leaves turn ochre yellow to tan-brown. Their leaf litter creates quite a crunch underfoot as one hikes along rivers and creeks in search of fall fishing, birding, or nature-viewing opportunities.

Sycamores are classified as monoecious, which means that they produce both male and female flowers on the same tree. From late April to early June, rounded clusters of green and red flowers hang from slender stems awaiting fertilization.

Their perfect, globe-shaped fruits are composed of hundreds of individual, fuzzy, tufted seeds called achenes. They may be found dangling like Christmas decorations from early September well into late winter. When ripe, the brown ball

**Sycamores can grow over 100 feet tall and are often found in association with other bottomland trees such as elm, ash, silver maple, and black willow.**





As young sycamores rapidly grow and expand their trunks, the saplings begin to split and slough off their outer bark layers, revealing a mottled green, tan, and gray pattern. With age, their pattern changes into a gray to bone-white coloration.

breaks down to send the seeds upon the wind like tiny parachutes in all directions. Many seeds are carried downstream to eventually reach new ground and germinate into seedlings. It is hard to believe that the makings of such a large tree start out inside that tiny seed.

On their way to becoming skeleton trees, young sycamores pass through a camouflage stage. As they rapidly grow and expand their trunks, the saplings begin to split and slough off their outer bark layers, revealing a mottled green, tan, and gray pattern. With age, their pattern changes into a gray to bone-white coloration.

### *From Buttons to Bureaus*

Buttonwood is another name for the sycamore, due to its wood being used in earlier times for the production of wooden buttons. Buttonwood is just one of many common names sycamores carry. Planetree and buttonball are also frequently used to reference this species. Its scientific name is *Platanus occidentalis*.

Its close-grained wood is heavy and difficult to split. While not a good candidate for construction lumber, the wood is useful in the timber industry. Crates, butcher blocks, particleboard, interior trim, flooring, and furniture have all been made from sycamore trees.

### *Habitat Heroes*

Like our mighty oaks, sycamores are susceptible to the anthracnose fungus, which defoliates the trees and weakens their defenses against other threats such as insect invasion. The healthiest trees survive to grow new leaves after an attack by anthracnose. Their overall growth may be hindered by the effects of this fungus.

However, despite threats from such diseases as anthracnose, sycamore populations in Missouri are doing well. They stand proudly over our river ways providing shelter and food for wildlife.

In Missouri, it is estimated that more than 95 percent of the great blue heron breeding rookeries are found in the open crowns of sycamore trees. Composed of a colony of several bulky stick nests, these rookeries afford protection for the new generation of heron chicks.

Sycamore seeds are eaten by many songbirds including chickadees and American goldfinches. It has been said that the now extinct Carolina parakeet relished the seeds. Today, one can only





imagine the sight of colorful parakeets feasting among the white branches and large green leaves of sycamores growing along the banks of Missouri's waterways.

From their large branches to their hollow trunks with peeling bark, sycamore trees provide homes for animals such as eagles, warblers, chimney swifts, bats, raccoons, and flying squirrels. Very large trees with hollow bases may become dens for black bears.

## Champion Trees

Tree scientists have come up with a standard formula that allows us to measure and document these giants. In Missouri, points are assigned to champion trees on the basis of height, trunk circumference, and crown spread. The tree must also be a native or naturalized species of the state to qualify. Missouri maintains a list of its largest trees in its Champion Tree Program database. A current list of the state's champion trees and information on how to measure and nominate a tree may be viewed on the Department of Conservation's Missouri State Champion Trees page at [mdc.mo.gov/node/4831](http://mdc.mo.gov/node/4831).

Cavity-nesting birds are greatly benefited by sycamores. Trees with open cavities are used by barred owls, great crested flycatchers, and wood ducks. With the arrival of spring comes the newly hatched wood duck young. These ducklings bravely jump like tiny paratroopers from their sycamore nests to the water below.

Even in death, sycamores continue to protect a great many species. A fallen sycamore creates habitat for fish and other aquatic life. Turtles bask in the sunlight upon the partially submerged trunks of sycamores, while native crayfish excavate gravel alongside the massive skeleton to create a refuge from hungry predators.

Undoubtedly, many fishhooks are snagged and imbedded in the sycamore skeletons submerged in my beloved Gasconade River. Come next summer, you will probably find me leaning against one of those big old skeleton trees, just waiting for the next strike on my fishing line. ▲

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*Gladys J. Richter is an interpretive writer from Richland, Missouri. She and her family enjoy many outdoor activities including fishing, kayaking, and seasonal nature walks.*

**Sycamores thrive where it is wet for most of the year.**



## Bufflehead

I REMEMBER MY first encounter with buffleheads almost 25 years ago on the Missouri River. I was hunting mallards, gadwalls, and other table ducks with my friend Kevin Meneau, a seasoned waterfowler, and he pointed out a small group of “butterballs” that had just landed riverward of our decoys. I asked him why he called them butterballs, and he explained that buffleheads have always had that nickname because they are so fat, like little footballs. A check through my binoculars revealed a small flock of black and white birds, each as chubby as Kevin had described, and each with a huge head, almost half the size of its diminutive body.



Most descriptions of the bufflehead (*Bucephala albeola*) begin with the drake’s colors, black and white, but a closer look reveals bands of deep green and violet beneath the large swath of white that wraps around the male’s head (see inset photo). When the light strikes a drake’s face just right, I’m reminded of a colorful flag from a faraway country. The female, more subdued in appearance, is clad in various shades of brown with a distinctive white cheek patch.

Buffleheads are a joy to photograph, not only because of their glossy colors, but also for their feeding behavior, which often leaves individuals with a muddy face upon return from each dive. Like other sea ducks, the bufflehead dives for food in rivers and lakes, but this species descends all the way to the bottom where it roots in thick mud for insect larvae, snails, and other treats. When it returns to the surface, the photographer is often greeted by the sight of an otherwise handsome duck with a comical splotch of brown gumbo around its bill.

Buffleheads are listed as an uncommon migrant in Missouri, but I often run across small flocks during their spring and fall migrations, especially on or near large rivers. The featured image was captured at Marais Temps Clair Conservation Area in St. Charles County, and the inset photo came from a small, private lake in Warren County. I usually find buffleheads in groups of five to 10 individuals, and I enjoy watching them take turns diving while others in the group serve as sentries against predators. I’ve noticed that buffleheads will approach very close to a hide, as long as you are dead still and well camouflaged. The guards keep their eyes on unusual activity along the shoreline, but they are much more forgiving than mallards and other waterfowl.

Buffleheads typically nest in woodpecker cavities in the northern forests of North America, so you are not likely to find any ducklings in Missouri waters. When photographing migrating adults, concentrate your effort during the fringes of the day when the light is soft. Otherwise, the extreme contrast between the light and dark colors of the drake will give your camera fits. Other waterfowl, including mergansers, goldeneyes, and wood ducks, present the same challenges, but under the right conditions all of these brightly colored ducks can be nicely photographed.

—Story and photograph by Danny Brown

 (main) 500mm lens + 1.4 teleconverter • f/5.6 • 1/1600 sec • ISO 200

 (inset) 500mm lens + 1.4 teleconverter • f/6.3 • 1/640 sec • ISO 400

We help people discover nature through our online field guide.  
Visit [mdc.mo.gov/node/73](http://mdc.mo.gov/node/73) to learn more about Missouri’s plants and animals.





## Scrivner Road Conservation Area

*This 919-acre Cole County area boasts open fields, ponds, woodlands, glades, a shooting range, and 8 miles of hiking trail overlooking South Moreau Creek.*

WHEN SCRIVNER ROAD Conservation Area was acquired in 1984, it was a cattle farm that was extensively cleared of its forested acres and converted to fescue for hay and pasture. Since that time, much of the area has grown back as young forest or old field habitats. However, area staff continue to crop some of the bottomland fields along South Moreau Creek to provide additional food sources for wildlife.

Hikers can traverse the Moreau Creek Trail east from the shooting range, turning north along South Moreau Creek and along the bluffs above. Along this trail and across the area, birders may hear or see blue-winged warblers, common yellowthroats, and blue grosbeaks in open and brushy habitats, but field sparrows, indigo buntings, and eastern towhees are much more abundant. If hikers venture off the trail a bit, they may encounter tall larkspur, cone-flowers, blazing star, and other wildflowers on small glades during the growing season. Claywell Glade is an open, circular glade surrounded by mature forest in the northwest portion of the area — it's well off the trail and a bit harder to access, but its yellow coneflowers, false foxglove, hoary puccoon, and chinkapin oaks are tough to beat. Contact the area for information on how to get there.

The 9-acre Winegar Lake offers fishing opportunities for largemouth bass, bluegill, and channel catfish, as do the smaller Claywell and Trail ponds. Smaller ponds on the area are not managed or stocked for fishing but may contain green sunfish and other game fish. In addition to fishing, the area also offers opportunities for hiking; horseback riding; small game, deer, and turkey hunting; and



70–200mm lens • f/5.6 • 1/80 sec • ISO 400 | by Noppadol Paothong

shooting at the unstaffed shooting range. The shooting range provides facilities for shotgun, pistol, and rifle shooting and is free to the public.

Recent habitat management has worked to restore glade and woodland communities that were historically found on the area. The area's management approach has focused on removing eastern red cedar from open woodlands, thinning young and crowded hardwood stands on portions of the area, and using prescribed fire. Prescribed fire helps to thin forest stands and allow more sunlight to reach the ground to encourage native forbs and grasses, and to discourage aggressive invasive species such as tall fescue and cedar. The reintroduction of native wildflower seed and prescribed fire to areas that were previously fescue fields has increased the area's plant diversity and is highly beneficial to wildlife.

Scrivner Road Conservation Area is in Cole County, a few miles south of Russellville. Follow Route AA south to Scrivner Road, turn east and proceed 1½ miles to Scott Road. Follow Scott Road into the area.

—Frank Drummond, area manager



### Scrivner Road Conservation Area

**Recreation opportunities:** Hiking, horseback riding, fishing, hunting, shooting, wildlife viewing

**Unique features:** Glades and woodlands, South Moreau Creek

**For More Information:** Call 573-815-7900 or visit [mdc.mo.gov/node/a8415](http://mdc.mo.gov/node/a8415)





# MDC DISCOVER nature

To find more events near you, call your regional office (phone numbers on Page 3), or visit [mdc.mo.gov](http://mdc.mo.gov) and choose your region.

## DEER PROCESSING

**NOV. 1 • SATURDAY • 10 A.M.**

*Kansas City Region, Anita B. Gorman  
Discovery Center, 4750 Troost Ave.,  
Kansas City, MO 64110*

*No registration required, call 816-759-7300 for  
more information • Ages 10 and older*

Not sure how to prepare your deer? Join us at the Discovery Center to watch and participate in the processing of a field-dressed deer. Learn where different cuts of meat come from and how to extract those cuts. You will have the opportunity to grind, slice, and package the meat for preparation at home.

## DUCK DECOY CARVING

**NOV. 7-8 • FRIDAY • 6-10 P.M. AND  
SATURDAY • 8 A.M.-2 P.M.**

*Southeast Region, Cape Girardeau  
Conservation Nature Center, 2289 County  
Park Drive, Cape Girardeau, MO 63701  
Registration required, call 573-290-5218  
Ages 8 and older, families*

Make a beautiful cork decoy to use for waterfowl hunting or as unique art. Learn duck identification, duck ecology, and decoy history

as you sculpt and paint your own decoy. Cost for materials is \$15. Children under 12 must be accompanied by an adult.

## NATURE CENTER AT NIGHT: WHO GOES THERE?

**NOV. 13 • THURSDAY • 5-8 P.M.**

*Southeast Region, Cape Girardeau  
Conservation Nature Center, 2289 County  
Park Drive, Cape Girardeau, MO 63701  
No registration required, call 573-290-5218  
for more information • All ages, families*

Can you solve the animal mysteries? People often find evidence of animals but don't get to see them up close. Drop by anytime between 5 and 8 p.m. to piece together clues and discover who lives at the nature center. Youth and adult groups welcome.

## BASIC FIRE STARTING AND CAMP-SIDE COOKING

**NOV. 21 • FRIDAY • 5-8 P.M.**

*Kansas City Region, Lake City Range,  
28505 E. Truman Road, Landahl Park,  
Buckner, MO 64016*

# 6

## IDEAS FOR FAMILY FUN

*Registration required, call 816-249-3194*

*All ages, families*

Come join our staff in a fun-filled camping adventure! Learn multiple techniques in fire starting and how to safely set up your fire circle. Once our fires are started, we will prepare and cook some delicious camp food and share stories.

## FAMILY TREASURE HUNTING

**NOV. 22 • SATURDAY • 1-3:30 P.M.**

*Southeast Region, Cape Girardeau  
Conservation Nature Center, 2289 County  
Park Drive, Cape Girardeau, MO 63701  
No registration required, call 573-290-5218  
for more information*

*Ages 8 and older, families*  
Parents, grandparents, and adult mentors, bring your youngster(s) to learn a new outdoor skill. Geocaching is an outdoor "treasure" hunt using GPS units. We'll cover basic GPS use and then hit the trails. Dress for the weather. GPS units provided.

## DISCOVER NATURE: NATURE'S ORNAMENTS

**NOV. 29 • SATURDAY • 10 A.M.-2 P.M.**

*Ozark Region, Twin Pines Conservation  
Education Center, RT 1 Box 1998,  
Winona, MO 65588*

*Registration required, call 573-325-1381  
Ages 12 and older*

This year for the holidays, go native in your decorating with our Nature's Ornaments program. We'll be gathering up the fall bounty of pinecones, acorns, and anything else that would set off the holiday spirit for your home. Then we will return to our classroom to arrange our finds into something you'll be happy to display.

## DISCOVER NATURE PHOTO CONTEST

Show the world your idea of discovering nature in Missouri. Using your Google+, Instagram, or Twitter account, tag your Missouri nature photos with "#MDCdiscovernature." Your photos will appear on our website at [mdc.mo.gov/node/26255](http://mdc.mo.gov/node/26255), where you can also read the contest rules.

Every month, Department staff will select and post a winning photo.

**Please note that the contest ends Nov. 15 at 5 p.m. CST.** We'll publish all of the monthly winners in the January 2015 issue of the *Conservationist*.



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## I Am Conservation

Members of the Frederick Douglass Wildlife and Conservation Club pose for a photo at the August A. Busch Memorial Conservation Area in St. Louis, the site of club fishing trips at least twice a year. According to Willis Corbett, the club was formed in 1947 to give African-American sportsmen in the community an opportunity to gather with like-minded individuals at a time when other opportunities did not exist. "I'm the only living, original founding member," said Corbett. According to John Head, the organization was formed to promote, perpetuate, and preserve the ideas, principles, and aims of conservationists in the United States, and to provide opportunities for the next generation to become hunters, anglers, and responsible outdoorsmen. The club meets once a month at the Columbia Bottom Conservation Area and owns more than 100 acres of hunting land in Lincoln County that the club manages for wildlife. "The land sits right on the banks of the Cuivre River and is very rugged and rocky," said Corbett. "There is plenty of food and cover, and it is ideal for wildlife." Members of the club hunt frequently on the land and often get together in smaller groups to hunt and fish on the land and at other locations. "A new member of the club who kills his first deer or turkey is one of the happiest people you could see," said Corbett. —*photograph by Noppadol Paothong*